Claims

1. Apparatus for assisting a rescuer in performing CPR on a victim, the apparatus comprising:

at least one of a pulse sensor for measuring the pulse rate of the victim and an SpO2 sensor for measuring blood oxygenation;

electronics for processing the output of the sensor or sensors and determining one or more actions that the rescuer should perform to improve the CPR being performed; and

a prompting device for conveying the one or more actions to the rescuer.

2. The apparatus of claim 1 further comprising an external defibrillator.

3. The apparatus of claim 1 wherein the apparatus comprises an SpO2 sensor but not a pulse sensor.

4. The apparatus of claim 1 wherein the apparatus comprises a pulse sensor but not an SpO2 sensor.

5. The apparatus of claim 1 further comprising a chest compression sensor.

6. The apparatus of claim 5 wherein the chest compression sensor is an acclerometer.

7. The apparatus of claim 1 wherein the electronics is provided with information on compression rate.

8. The apparatus of claim 7 wherein the compression rate is sensed or derived from a chest compression sensor.

9. The apparatus of claim 1 wherein the prompting device comprises a device that conveys a desired rate of compression to the rescuer.

10. The apparatus of claim 9 wherein the device that conveys a desired rate of compression to the rescuer comprises a metronome.

11. The apparatus of claim 1 wherein the prompting device comprises a speaker and associated electronics for conveying audible instructions.

12. The apparatus of claim 1 wherein the electronics comprises a digital computer executing computer software.

13. The apparatus of claim 1 wherein the electronics compares compression rate to a desired CPR rate.

14. The apparatus of claim 1 wherein the electronics compares a measured level of blood oxygenation to a desired level.

15. The apparatus of claim 1 wherein the electronics provides a prompt instructing the rescuer to release from the chest during CPR delivery if the sensors indicate that the rescuer is not adequately releasing from the chest

16. The apparatus of claim 1 wherein the electronics provides a prompt to the user to press harder if the pulse sensor indicates that there is no measured pulse rate.

17. The apparatus of claim 1 wherein the electronics provides a prompt to press harder if the sensor indicate that a pulse is detected but SpO2 is below a defined level.

18. The apparatus of claim 1 wherein the electronics provides a prompt to increase compression rate if the sensors indicate that a pulse is detected, that chest compressions are at a defined level, and that SpO2 is still below a defined level.

19. The apparatus of claim 1 wherein the electronics provides prompts to increase compression rate and compression pressure simultaneously based on measurements from sensors.

20. The apparatus of claim 1 wherein the electronics provides a prompt for the user to interrupt chest compressions to give one or more breaths.

21. The apparatus of claim 20 wherein the prompt to give one or breaths is issued when sensor measurements show that blood circulation is occurring and that the cause of a falling SpO2 level may be an increase in metabolism.

22. The apparatus of claim 1 wherein the electronics provide a prompt to continue CPR without interruption for breathing based on SpO2 levels that were above a given threshold so as to ensure that there would be no break in circulation when blood oxygen levels remained high and ventilation was not yet required.